period set for responding to the office action that was mailed on December 2, 2002. Therefore we are enclosing herewith a petition and the fee for an extension of time.

Hereinafter the claims that are pending prior to the entry of the amendments in this response are called "currently pending claims." This response amends currently pending claims 1, 3, and 5 and adds new Claims 8-10. Upon amendment the above-identified US patent application will have one independent claim (amended claim 1) and 10 total claims (amended Claim 1, currently pending Claim 2, amended Claim 3, currently pending Claim 4, amended Claim 5, currently pending Claims 6 and 7, and new Claims 8-10). The Applicant previously paid a fee for up to 3 independent claims and 20 total claims. Therefore, a fee for excess claims is not needed.

The claim amendments and the new claims are supported by, inter alia, the description as follows:

Claim 1: in regard of (LIVM): page 18, lines 19-25
in regard of and/or: originally filed claim 1
Claim 3: page 25, lines 1-21 and page 29, lines 1-11 (as amended with response of November 30, 2001)
Claim 5: Biological activity of each example
New Claims 8-10: originally filed Claim 5 and the biological activity of each example

SEQUENCE LISTING

In item 1 on page 2 of the outstanding Office Action, the Examiner objects to our document entitled "Sequence Listing" (hereinafter referred to as the "November 30, 2001 Sequence Listing Document") and to our computer-readable diskette (hereinafter referred to as the "November 30, 2001 Computer-readable Diskette"), which were filed on November 30, 2001 (via Express Mail) with a document entitled "Response to Notification of Missing Requirements Under 35 U.S.C. 371 in the United States

Designated/Elected Office (DO/EO/US)."

To respond to these objections, we are filing today via first-class mail with a Certificate of Mailing dated May 2, 2003 the following items: a document entitled "Amendment to and Replacement of Sequence Listing and Computer Readable Copy Thereof Under 37 C.F.R. § 1.825"; a document entitled "Sequence Listing" (hereinafter referred to as the "May 2, 2003 Sequence Listing Document"); a computer-readable diskette (hereinafter referred to as the "May 2, 2003 Computer-readable Diskette"); a document entitled "Marked-up Page 2"; and a document entitled "Statement to Support Filing and Submission in Accordance with 37 C.F.R. §§ 1.821-1.825."

The document entitled "Amendment to and Replacement of Sequence Listing and Computer Readable Copy Thereof Under 37 C.F.R. § 1.825" replaces the November 30, 2001 Sequence Listing Document with the May 2, 2003 Sequence Listing Document, and replaces the November 30, 2001 Computer-readable Diskette with the May 2, 2003 Computer-readable Diskette. Therefore, the objections that are set forth in item 1 of the outstanding Office Action are moot and should be withdrawn.

CLAIM OBJECTIONS

On page 2, second paragraph the Examiner objects to currently pending claims 1 and 3 because the claims cite amino acid sequences without including sequence ID numbers. Amended claims 1 and 3 overcome the Examiner's objections; and, thus, the objections should be withdrawn.

CLAIM REJECTIONS - 35 U.S.C. 112

On page 2, items 3 and 4 of the office action, the Examiner rejects currently pending claims 1-7 under 35 U.S.C. 112, second paragraph as being indefinite because of the use of the term "and/or" in currently pending claim 1. The Applicant respectfully traverses

this rejection because the phrase "and/or" is well-known to those with ordinary skill in the art. Furthermore, this rejection is now moot and should be withdrawn because amended claim 1 does not contain the phrase "and/or."

The Examiner also rejects currently pending claim 1 in item 4 on page 2 of the office action as being indefinite because the claim cites (LIVM) in the sequence; and it is allegedly not clear whether the sequence has one amino acid residue at this position with a preferential order (L, I, V, M) or the sequence contains LIVM subsequence. Please note that the sequence (LIVM) in the sequence shown in currently pending claim 1 does not refer to the subsequence of four amino acid residues, but refers to only one amino acid residue at that position. Moreover, in practice, in this case there is not any preferential order. Consequently, the Applicant respectfully traverses this rejection. Furthermore, this rejection is now moot and should be withdrawn because amended Claim 1 refers to "(L, I, V, M)" rather than to (LIVM).

The Examiner rejects currently pending claim 5 in item 5 on page 3 of the office action because of the use of the term "to treat disorders of the immunological system". The Applicant respectfully traverses this rejection. Furthermore, this rejection is now moot and should be withdrawn because amended Claim 5 specifies that the glycoconjugate treats disorders of an immunological system related to higher production of tumor necrosis factor (TNF).

The application is now in condition for allowance. Allowance of the application at an early date is respectfully requested.

The Applicant reserves the right to seek protection for any unclaimed subject matter, either subsequently in the prosecution of the present case or in a divisional or continuation application.

This response amends currently pending claims 1, 3, and 5 and adds new Claims 8-10. The amendments and additions that are described in the preceding sentence were done to improve the wording of the claims and/or to more fully claim the Applicant's

invention and were not done to overcome the prior art, were not done to overcome rejections under 35 U.S.C. § 112, and were not done to overcome any other rejections or objections. The amendments and additions that are described in the first sentence of this paragraph shall not be considered necessary to overcome the prior art, shall not be considered necessary to overcome rejections under 35 U.S.C. § 112, and shall not be considered necessary to overcome any other rejections or objections.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to Deposit Account No. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 C.F.R § 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed; and the petition fee due in connection therewith may be charged to deposit account No. 12-0415.

I hereby certify that this correspondence with all of the indicated enclosures is being deposited with the United States Postal Service with sufficient postage as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Arlington, VA 22313-1450 on

May 2, 2003
(Date of Deposit)

JOHN PALMER
(Name of Applicant, Assignee or Registered Representative)

(Signature)

5-2-03
(Date)

Respectfully submitted,

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Enclosures: Appendix A (1 page)
Appendix B (2 pages)
Appendix C (1 page)
Petition and copy of petition for an extension (2 pages)
Check no. 17018 for $410

Claim 1. (Amended twice) A glycoconjugate formed by non-covalent association of a polysaccharide with a polypeptide, wherein the polysaccharide has a molecular weight between 50 and 250 KDa, supporting phosphate functional groups in range 1 of these phosphate groups by between 5 and 25 residues of monosaccharide, with 40% mannose and 60% of either (1) glucose, (2) galactose, or (3) glucose and galactose making up a main skeleton integrated by 1-6 bonds with 1-2 branches; wherein the polypeptide comprises a consensus amino-acid sequence (SEQ ID NO:1) determined by $Z_{3-48}CZ_{9-13}$ C(Q,E,R,K) Z($Z_{hydrophobic}$) (L,I,V,M)Z_{15-39} CC($Z_{hydrophilic}$) (Q,E,H) (L,V)Z_6 CZC Z_2(L,I)Z_{13-56}G Z_{15-26} CZ(V,I,L,M)Z_{1-8} CZ_{1-12}, where the parentheses in the sequence indicate a preferential order, and wherein Z_n is selected from the group consisting of n-amino acids.

Claim 3. (amended twice) A glycoconjugate as claimed in Claim 1, wherein the polypeptide is a dimer having a molecular weight of 12 ± 0.5 KDa, wherein the dimer has a minor subunit and a major subunit,
wherein the minor subunit is
ESKGEREGSSSQQ**C**RQEVQRKDLSS**CE**RY**L**RQSSSRR (SEQ ID NO:2) or
PSQQG**C**RGQIQEQQNLRQ**CQ**EY**I**KQQVSGQGPRR (SEQ ID NO:4) and wherein the major subunit is
QQQESQQLQQ**CC**N**QV**KQVRDE**C**Q**C**EA**I**KYIAEDQIQQGQLH**G**EESERVAQRAGEIVSS**C**G**V**R**C**MRQ TR (SEQ ID NO:3) or
QERSLRG**CC**D**HL**KQMQSQ**C**R**C**EG**L**RQAIEQQQSQGQLQ**G**QDVFEAFRTAANLPSM**C**G**V**SPTE**C**RF (SEQ ID NO:5);
wherein specific amino acids of the consensus sequence are indicated by boldface.

Claim 5. (amended twice) A glycoconjugate as claimed in Claim 1, wherein the glycoconjugate has pharmacological activity and can be used medically to treat disorders of an immunological system related to a higher production of tumor necrosis factor (TNF).

09/913,351 Appendix B - Marked up claims

Claim 1. (Amended twice) A glycoconjugate formed by non-covalent association of a polysaccharide with a polypeptide, wherein the polysaccharide has a molecular weight between 50 and 250 KDa, supporting phosphate functional groups in range 1 of these phosphate groups by between 5 and 25 residues of monosaccharide, with 40% mannose[,] and 60% of either (1) glucose[, and/or] (2) galactose, or (3) glucose and galactose making up a main skeleton integrated by 1-6 bonds with 1-2 branches [not higher than 60%]; wherein the polypeptide comprises a consensus amino-acid sequence (SEQ ID NO:1) determined by $Z_{3-48}CZ_{9-13}$ C(Q,E,R,K) Z($Z_{hydrophobic}$) [(LIVM)](L,I,V,M)Z_{15-39} CC($Z_{hydrophilic}$) (Q,E,H) (L,V)Z_6 CZC Z_2(L,I)Z_{13-56}G Z_{15-26} CZ(V,I,L,M)Z_{1-8} CZ_{1-12}, where the parentheses in the sequence indicate a preferential order, and wherein Z_n is selected from the group consisting of n-amino acids.

Claim 3. (amended twice) A glycoconjugate as claimed in Claim 1, wherein the polypeptide is a dimer having a molecular weight of 12 ± 0.5 KDa, wherein the dimer has a minor subunit and a major subunit,
wherein the minor subunit is
ESKGEREGSSSQQ**C**RQEVQRKDLSS**CE**RY**L**RQSSSRR (SEQ ID NO:2) or
PSQQG**C**RGQIQEQQNLRQ**CQ**EY**I**KQQVSGQGPRR (SEQ ID NO:4) and wherein the major subunit is
QQQESQQLQQ**CC**N**QV**KQVRDE**C**Q**C**EA**I**KYIAEDQIQQGQLH**G**EESERVAQRAGEIVSS**C**G**V**R**C**MRQ TR (SEQ ID NO:3) or
QERSLRG**CC**D**HL**KQMQSQ**C**R**C**EG**L**RQAIEQQQSQGQLQ**G**QDVFEAFRTAANLPSM**C**G**V**SPTE**C**RF (SEQ ID NO:5);
wherein specific amino acids of the consensus sequence are indicated by boldface.

09/913,351 Appendix B - Marked up claims

Claim 5. (amended twice) A glycoconjugate as claimed in Claim 1, wherein the glycoconjugate has pharmacological activity and can be used medically to treat disorders of an immunological system related to a higher production of tumor necrosis factor (TNF).

09/913,351 Appendix C - New claims

Please add the following new claims 8-10, which are set forth below.

Claim 8. A glycoconjugate as claimed in Claim 3, wherein the glycoconjugate has pharmacological activity and can be used medically to treat disorders of an immunological system related to a higher production of tumor necrosis factor (TNF).

Claim 9. A glycoconjugate as claimed in Claim 1, wherein the glycoconjugate has pharmacological activity and can be used medically to inhibit production of tumor necrosis factor (TNF).

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Claim ~~9~~ 10. A glycoconjugate as claimed in Claim 3, wherein the glycoconjugate has pharmacological activity and can be used medically to inhibit production of tumor necrosis factor (TNF).